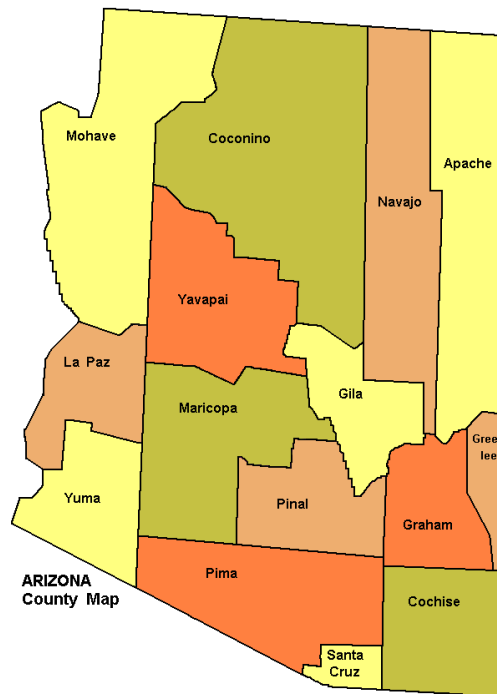


# **Southeast Arizona**

## **(Cochise Region)**

### **Broadband Business Case Analysis (BCA)**



Counties include: Greenlee, Graham,  
Cochise and Santa Cruz

**For**

**Arizona Strategic Enterprise  
Technology Office (ASET)**

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**April 15, 2014 (Version 04.03.14.0)**

# **Southeast Arizona Broadband Business Case Analysis (BCA)**

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# Southeast Arizona Broadband Business Case Analysis (BCA)

## Preface:

High speed Internet is the new essential infrastructure for this century's job creation, educational and healthcare transformation, and economic development, just as highways, railroads, canals, electricity, and telephone were for previous generations. It is the 21<sup>st</sup> century's infrastructure challenge and it is becoming ever more critical that communities in Southeast Arizona have adequate bandwidth to help our local economies, create jobs, and improve education, healthcare, public safety, and quality of life.

Earlier last year we saw the formation of a **Southeast Arizona Broadband Steering Committee** ([http://www.cochise.az.gov/cochise\\_facilities.aspx?id=12402](http://www.cochise.az.gov/cochise_facilities.aspx?id=12402)) with broad participation among regional economic development, educational technology, transportation, government IT, healthcare, and public safety stakeholders. The Committee and its activities are being funded, in part, by a federal broadband grant administered through the **State of Arizona's Digital Arizona Program (DAP - <http://azbroadband.gov/>)**.

Southeast Arizona has been selected to receive these funds to help advance broadband assessment, gap analysis, strategy, tactics, and application adoption in our region, Cochise, Graham, Greenlee, and Santa Cruz counties. **Systems Technology Staffing, LLC** has been hired for Community Planning support under the grant and their consultants are facilitating the Southeast Arizona Broadband Steering Committee, collecting and analyzing regional broadband and economic data, producing a series of reports, and otherwise assisting with this project.

There are several **Digital Arizona Program (DAP)** initiatives at the state level. The Governor's **Digital Arizona Council (DAC)** with their web presence at [http://www.digitalarizona.gov/Digital\\_Arizona\\_Council/About\\_DAC.html](http://www.digitalarizona.gov/Digital_Arizona_Council/About_DAC.html) met quarterly and is working on an Arizona Broadband Strategic Plan. The **Arizona Broadband Map** portal ([http://www.digitalarizona.gov/Maps/Arizona\\_Broadband\\_Maps.html](http://www.digitalarizona.gov/Maps/Arizona_Broadband_Maps.html)) offer interactive insight to broadband coverage across the state and the community planning version integrates substantial demographic and economic data to aid policy analysis and planning. DAP has recently launched an **Arizona Broadband Speed Test** available for resident and enterprise use at <http://www.digitalarizona.gov/Survey/AffiliationQuestion.html> for gathering information about broadband coverage and performance across the State. They are strongly encouraging Southeast Arizona broadband stakeholders to take the speed test periodically and to also distribute the information and request to utilize among their respective stakeholder community.

The **Arizona Strategic Enterprise Technology Office (ASET)** coordinates these initiatives. Their office address is 100 N. 15th Ave. Suite 400, Phoenix, AZ 85007, and their main phone number is: (602) 542-2250. Additional information and resources may

be found online at the ASET website: <http://aset.azdoa.gov/> and the Digital Arizona Program's (DAP) website at <http://DigitalArizona.gov/>. The DAP primary email address is [question@DigitalArizona.gov](mailto:question@DigitalArizona.gov).

**Disclaimer:** None of the information in this report should be construed as official public policy of Southeast Arizona's regional governments or the Arizona State government. However, funding to assist in producing this report came from a federal NTIA grant managed by an Arizona State agency.

STS does not confirm and/or validate the accuracy of the broadband maps identified in this document or any other document attached or linked to this document.

# Southeast Arizona Broadband

## Business Case Analysis (BCA)

### Executive Summary:

The **Southeast Arizona Counties** that are the focus of this Broadband Business Case Analysis (BCA) include **Cochise, Graham, Greenlee, and Santa Cruz** with Cochise County leading the procurement and management of broadband consultant services.

A **Southeast Arizona Broadband Steering Committee** was formed with broad participation among regional economic development, educational technology, transportation, government IT, healthcare, and public safety stakeholders to help ensure that the Southeast Arizona region has adequate bandwidth to help our local economies, create jobs, and improve education, healthcare, public safety, and quality of life.

Because of a shortage of resources (manpower), Douglas, Arizona was selected as the main project to proceed with in the development of a Business Case Analysis.

### History of the Deliverables - Reports:

This process of report generation included three significant milestone reporting periods. The first report was delivered on schedule before July 31, 2013. This report contained specifics about the original four regions, broadband coverage and service, and most important were the recommendations to make the Digital Arizona Program a success and provide sustainability for the region's major objective(s).

Prior to the second report, delivered on schedule before December 31, 2013, ASET conducted a meeting on November 25, 2013. In attendance were the region's stakeholders and consultants. The message from ASET was clear, it was to formulate a project and generate demand aggregation from the regional stakeholders and providers. This particular report demonstrated active work on the three major regions: NACOG, CAG and S.S/E Arizona (Cochise). It set the agenda for regional stakeholders to identify project(s) that would have the best likelihood for success. See Appendix A .

This final, 3<sup>rd</sup> report, represents the outcome of the Digital Arizona Program Community Planning and Technical Assistance activities. There are three regional reports, one for NACOG, CAG and Cochise. Each one will be separate. This document serves as the **Cochise Final Deliverable report**. It addresses the recommendations as identified in the first report and responds to the requirements of the Business Case Analysis contract with the regions. It provides a flow into the Technical Assistance report, where the GAP Analysis outcome to date is presented.

**Summary:**

This report identifies the contractual objectives as defined in the FORM DAP-AT-E2, EXHIBIT 2 FOR BROADBAND LOCAL PLANNING ASSISTANCE TO ARIZONA COMMUNITIES, SEPTEMBER 28, 2013.

This report is structured to respond to the Statement of Work as described in the FORM DAP-AT-E2 with identification of specific objectives and a response relative to the deliverables of the objectives. Additionally, it provides a brief history of the major REPORT milestones and detail descriptions of the specific Douglas project in Cochise Four County region.

It is recommended that the Douglas project be emulated as a template for Project Management, of the other county's broadband programs. The Douglas project has delivered on Leadership, Action Items, Scheduling and Demand Aggregation assets (stakeholders and providers), working closely together to bring about results.

The Cochise Four County Broadband Local Planning Assistance to Arizona Communities report, (first of 3 report milestones – July ), produced and provided by Systems Technology Staffing and International Research Center July 31, 2013, served as the document that identified the broadband services and capacities throughout the Cochise Four County region. It also included many recommendations that were subsequently followed in the second report (ASET/NTIA Quarterly - December 31, 2013 see Appendix A) and delivered in the third report (April 30, 2014).

Limited resources and time have prevented the development of additional projects in the region. There are needs and many opportunities for South / Southeastern Arizona to fulfill and they include, but are not limited to:

1. Nogales, Arizona and expansion of the Mariposa Port of Entry.
2. Safford, Arizona with the expansion of the Freeport McMoran Inc. mine and supply chain operations to support the mine.
3. Clifton/Morenci with road expansions, mining and workforce training and housing.

## **What does broadband in Arizona look like?**

Some 46% percent of Arizona households have connectivity at less than the National broadband definition of 4 Mbps download and 1 Mbps upload. Akamai data shows that Arizona ranks 45th in the nation with a 4.8 Mbps average speed experienced by broadband subscribers (second quarter 2012). There is significantly less availability of high-speed services in rural parts of the state compared to metropolitan areas. Unless something is done, this “digital divide” will only increase because modern Internet is becoming increasingly video intensive. The next generation of Internet and applications will be all about high definition video, requiring as much as ten times the broadband capacity of previous generation Internet uses. In addition, businesses will increasingly rely on cloud computing, web-conferencing with real time video for communications and collaboration, and telework, each layering on the need for even greater broadband capacity. So previous definitions of sufficient Internet access speeds are rapidly becoming obsolete.

The Governor signed legislation during the 2011-12 session (SB 1402) that enables Arizona's state highway rights of way to be utilized to help build out badly needed middle mile broadband fiber capacity to rural areas of Arizona while supporting other high-capacity middle mile and long haul connectivity needs. A number of companies have expressed interest in utilizing the resources made available by SB1402. During the most recent legislative session, a telemedicine bill (SB 1353) was passed for payment parity for remotely delivered services, the implementation of which will simultaneously reduce medical costs, save lives, and improve rural economies by requiring health insurance providers to reimburse medical specialists for services provided via broadband-based telemedicine. And a data center bill (HB 2009) was passed to encourage regional placement of data center facilities via favorable tax policy.

Specifically, this Business Case Analysis (BCA) shows Southeast Arizona regions have limited broadband capacity, diversity, and backhaul capabilities. Minimum Sufficient Speed Threshold tables were identified for four major application areas, economic development, education, telemedicine and public safety. Even with speed thresholds as low as 10 Mbps download and 5Mbps upload, no community reviewed in these three Southeast Arizona regions could be considered as meeting threshold standards for all of these important applications. This is a critical issue that must be resolved for continuous economic development and improvements in education, healthcare and public safety to continue as well as for the general economic well-being of Southeast Arizona communities. The importance of doing this is because it will ultimately enhance the four major applications, as next described.



## **Four Major Applications**

### **Foster local ECONOMIC DEVELOPMENT (JOBS) by:**

- Attracting new businesses plus retaining and expanding the current businesses
- Providing local jobs and developing new skill-sets necessary to increase employment and community sustainability in today's knowledge economy
- Supporting local entrepreneurs who engage with the global economy using broadband and the Internet to deliver goods and services around the globe

### **Improve EDUCATION success within local communities by:**

- Increasing the effective use of interactive digital learning solutions such as self-paced learning and remote content resources for transformational education initiatives
- Providing distance learning and collaboration in classrooms, homes, and businesses for students of all ages with universities around the world
- Enabling real-time progress accountability for student and staff performance supporting early intervention and remediation

### **Improve HEALTH CARE (Telemedicine) availability and quality while lowering costs by:**

- Using high-speed broadband connectivity for local doctors and healthcare providers to collaborate with remote specialists
- Improving local triage to reduce unnecessary transportation of patients to remote facilities
- Providing remote well-being check-ups from existing local facilities such as schools, libraries, etc.
- Providing enhanced in-home care with monitored sensors and video check-ups by remote health care providers

### **Improve PUBLIC SAFETY and save lives by:**

- Delivering accurate real-time data to all first-responders as needed and across jurisdictional/agency boundaries and connecting ad-hoc groups on a per event basis

## **Cochise / Douglas Project**

Cochise selected the town of Douglas, Arizona as its main project. Economic Development is a key success factor for Douglas. It represents jobs (construction and FTEs) for the Port of Entry – transportation and commerce: including local anchor businesses and government. Education is another key element and the Unified School District and the Cochise Community college are active broadband team members. Cochise recognizes the importance of the Prison and Bisbee/Douglas International Airport (BDI) as they are huge components to public safety and economic development. The Airport Master Plan is currently underway and it is a \$ 200,000 project that could generate future economic development. The prison system has several facilities that could benefit from a better broadband infrastructure. Healthcare or Telemedicine has not had a presence. It should be noted that the Copper Queen Hospital offers telemedicine services, such as teletrauma, teledermatology, telestroke, and telemonitoring.

Copper Queen Community Hospital has three affiliated Rural Health Clinics, under the title of Copper Queen Medical Associates. These clinics are open to both insured patients and those needing sliding fee scale services. They are located in Bisbee, Palominas, and Douglas, and provide care for patients of all ages. The Department of Corrections serves as the representative for Public Safety. Economic Development, Education and Public Safety are the Key Applications for Douglas.

### **Project Process:**

The project's process flow followed the Community Planning Guidelines. It began during the second of the four Broadband Forums conducted throughout the state. The Cochise Broadband Forum was held in Naco, Arizona on November 8, 2013. At the conclusion of the meeting, the Chair of the Cochise Board of Supervisors asked for the next steps. The response was to find a project that had a need for broadband. Douglas, Arizona was selected as the main project. Due to limited resources, manpower, Douglas is the sole project for the Cochise Region. This does not exclude the importance of other community's projects. For example, the Mariposa Port of Entry in Nogales is an ongoing project, the mines in Clifton/Morenci and Safford are ongoing projects and when resources become available there will be project plans for the remaining communities, it just cannot be started by the end of April 2014. The Community Planning Guidelines are identified in the Business Case Analysis and include five unique Deliverables completed ending April 15, 2014. The five deliverables are:




# Cochise – Douglas, Arizona Broadband Project

## 1. Preparation of a Business Case Analysis

I. Work with the identified regions to assess the Inventory of broadband services and infrastructure currently available.

**Deliverables:** Community Data Sets identify the four regions and seven community's assets. See Appendix B. Broadband services were obtained from the Arizona Broadband Community Planning Map and by contacting the service providers to obtain the most current coverage and capacity. See Appendix C for a list of Douglas providers.

Douglas, Arizona



Douglas:

Population in 2011: 17,439. Population change since 2000: +21.8%

Males: 9,536 (54.7%)  
Females: 7,903 (45.3%)

Median resident age: 32.2 years  
Arizona median age: 37.1 years

Zip codes: 85607, 85608, 85655.

Douglas Zip Code Map

Estimated median household income in 2009: \$30,881 (it was \$20,567 in 2000)  
Douglas: \$30,881  
Arizona: \$48,745  
Estimated per capita income in 2009: \$13,067  
Douglas city income, earnings, and wages data  
Estimated median house or condo value in 2009: \$91,605 (it was \$62,000 in 2000)  
Douglas: \$91,605  
Arizona: \$187,700  
Mean prices in 2009: All housing units: \$108,329; Detached houses: \$110,360; Townhouses or other attached units: \$110,860; In 2-unit structures: \$134,524; In 3-to-4-unit structures: \$117,811; In 5-or-more-unit structures: \$137,376; Mobile homes: \$71,522; Occupied boats, RVs, vans, etc.: \$36,364  
Median gross rent in 2009: \$489.

For population 25 years and over in Douglas:  
High school or higher: 54.8%  
Bachelor's degree or higher: 9.2%  
Graduate or professional degree: 3.5%  
Unemployed: 10.7%  
Mean travel time to work (commute): 16.7 minutes

Most common industries in 2005-2009 (%)  
Public administration (19%)  
Educational services (17%)  
Retail trade (13%)  
Construction (10%)  
Administrative and support and waste management services (7%)  
Accommodation and food services (7%)  
Transportation and warehousing (6%)

Most common occupations (%)  
Law enforcement workers including supervisors (11%)  
Building and grounds cleaning and maintenance occupations (9%)  
Vehicle and mobile equipment mechanics, installers, and repairers (6%)  
Material recording, scheduling, dispatching, and distributing workers (5%)  
Retail sales workers except cashiers (4%)  
Electrical equipment mechanics and other installation, maintenance, and repair occupations including supervisors (4%)  
Construction laborers (3%)

Cochise County  
Arizona

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The CDS example above represents Douglas, Arizona. It can be retrieved using the Broadband Community Planning Map's Search on Places option.

## The CDS provides:

<b>Population in 2011: 17,439. Population change since 2000: +21.8%</b>							
Males: 9,536	(54.7%)						
Females: 7,903	(45.3%)				<a href="#">Douglas Utility Companies</a>		
					<a href="#">Douglas Broadband Providers</a>		
Median resident age:	32.2 years				<a href="#">Arizona State Highways</a>		
Arizona median age:	37.1 years				<a href="#">Arizona Rail Roads</a>		
					<a href="#">Douglas in more Detail</a>		
Zip codes: 85607, 85608, 85655.					<a href="#">Douglas School District</a>		
					<a href="#">Douglas Medical Centers</a>		
Douglas Zip Code Map					<a href="#">Douglas Community College</a>		
Estimated median household income in 2009: \$30,881 (it was \$20,567 in 2000)					<a href="#">Arizona Electric Co's Map</a>		
Douglas:	\$30,881						
Arizona:	\$48,745				<a href="#">Arizona Prospector</a>		
Estimated per capita income in 2009: \$13,067							
Douglas city income, earnings, and wages data							
Estimated median house or condo value in 2009: \$91,605 (it was \$62,000 in 2000)							
Douglas:	\$91,605						
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Mean prices in 2009: All housing units: \$108,329; Detached houses: \$110,360; Townhouses or other attached units: \$110,860; In 2-un							
Median gross rent in 2009: \$489.							
<b>For population 25 years and over in Douglas:</b>							
High school or higher: 54.8%							
Bachelor's degree or higher: 9.2%							
Graduate or professional degree: 3.5%							
<b>Unemployed: 10.7%</b>							
Mean travel time to work (commute): 16.7 minutes							
<b>Most common industries in 2005-2009 (%)</b>					<b>Most common occupations (%)</b>		

The hyperlinks relieve the user from having to utilize several search engines to obtain:

1. Utility Companies
2. Broadband Providers
3. State Highways for Right of Way, Clearances and Ordinances
4. Rail Roads for Commerce, Right of Ways
5. School Districts for Distance Learning and Educational Broadband services
6. Medical Centers within the region for Telemedicine

II. This Inventory will (and has) utilize(d) such data resources as the Broadband Community Planning Map, City-Data, ACA, DES, USAReference and other applicable data resources.

**Deliverables:** The Community Planning Map can be used to search the inventory assets of a particular community, community vs county and county vs state statistics. City-Data and ReferenceUSA serve as the data-pools for the demographics of a community. Arizona Commerce Authority (ACA) provides rural grants to rural Arizona and Department of Economic Security (DES) is researched for labor statistics. The actual deliverable is formulated in the CDS, as depicted above.

III. A Systems Requirements document will be prepared.

**Deliverable:** During the second of four meetings conducted with Douglas, a Systems Requirement document was prepared. The purpose of the document was to provide a mechanism for the users to record their current broadband services and identify their key objectives. The complete document used for the Systems Requirements can be seen in Appendix D. The actual questionnaire format is demonstrated on the following page.

The Systems Requirements documents (one for stakeholders and one for providers), identifies the limitations of what broadband services are currently available. The Technical Assistance consultant directs the activities and establishes the agendas for action meetings. The result is identification of the GAPs, and as these are determined plans for demand aggregation and alternative system solutions will be presented along with budgets, time-frames and leadership.

### **Cochise County Broadband Gap Analysis:**

- There is limited DSL coverage in Cochise County with 81.0% of the population able to get DSL at  $\geq 768$  Kbps downstream but only a slim 38.9% can get  $\geq 6$  Mbps. All population centers have some DSL coverage, but far from complete and there is additional coverage in the center and west side of the county.
- There is also limited cable modem coverage in Cochise County with only 71.5% of the population having available service, though consistently at speeds  $\geq 10$  Mbps. All population centers except Wilcox have some cable modem coverage, but far from complete and there is virtually no coverage outside these areas.
- Fixed wireless (licensed and unlicensed) has a more extensive footprint estimated to reach 99.4% of the Cochise County population with  $\geq 768$  Kbps downstream, but only 57.8% can get  $\geq 6$  Mbps. However, much of the Sierra Vista area can get  $\geq 6$  Mbps coverage.
- Mobile wireless in Cochise County has a similarly broad footprint to fixed wireless, estimated to reach 99.9% of the population at speeds  $\geq 768$  Kbps and 79.4% at speeds  $\geq 6$  Mbps. Higher speed services are centered around the Benson, Douglas, and Sierra Vista areas.
- A limited number of Middle Mile points, almost always fiber fed, are available primarily from AZNet, CoxCom, CenturyLink, Level3 Communications, Valley Telecom Group, and Zayo.
- The results of the Douglas – Demand Aggregation show there is a Last Mile – Distribution problem. The Douglas Broadband committed is addressing this issue. Further definitions are available in the Technical Assistance document.

## SYSTEM REQUIREMENTS SUMMARY:

**Name of Business:** \_\_\_\_\_

**Location (address):** \_\_\_\_\_

**Type of Business:** \_\_\_\_\_  
(Education, Medical, Government, Business, Public Safety)

**Major Application(s):** \_\_\_\_\_  
(taxes, accounting, enrollment, admission/transfer/discharge, production, sales, marketing, etc.)

**Describe Volume and Frequency:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Number of Users:** \_\_\_\_\_ **Peak Time of Day/Night:** \_\_\_\_\_

**Number of PCs in facility(s):** \_\_\_\_\_

**Description of Current Equipment** (switches, servers, host computer(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Describe Current Broadband Configuration** (fiber, DSL, T1 / Copper, DS3, etc.)

**Age of Equipment:** \_\_\_\_\_ years      **Equipment under Maintenance:** Yes or NO circle

**Terms of Contract and Contract Period:** \_\_\_\_\_  
\_\_\_\_\_

**Describe YOUR Major Goal:** \_\_\_\_\_  
\_\_\_\_\_

In terms of bandwidth if known, what synchronous throughput capacity and/or speed ( Mbps )...not how it is delivered ( fiber vs copper vs wireless, etc .)

<b>MUST Have</b>	<b>LIKE to Have</b>
_____	_____
_____	_____
_____	_____

**Please indicate your Name and contact information:**

**NAME:** \_\_\_\_\_ **email:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

IV. An analysis of potential demand aggregation and its incentive for private sector broadband investment in each region will be created.

**Deliverable:** After the second meeting with the Stakeholders and Service Providers, both were provided systems requirements documents. These documents serve as the first step towards user and provider's Demand Aggregation. The summary of these findings can be seen in Appendix E. During these two meetings the Service Providers updated the broadband maps with the coverage they actually provided, but not shown. The second and third meeting with stakeholders and providers established the path to seek aggregation of systems by government, education, and public safety. A list of businesses with less than 49 employees and gross sales of more than one million was sent to the Douglas City Manager to solicit private business help.

The complete document used for the Provider's Requirements can be seen in Appendix F. The actual questionnaire format is demonstrated on the following page.

**NETWORK / FACILITY SUMMARY:**

**Name of Business:** \_\_\_\_\_

**Location (address):** \_\_\_\_\_

**Business (Public or Private) (circle one)**    **Public**        **Private**  
**International,        National,        Regional,        Local (circle best description)**

**Arizona Corporation Commission or FCC registration type:** (CLEC, ILEC, common carrier, unregistered, etc.) \_\_\_\_\_

**Local Contact Person (name, title email, phone):** \_\_\_\_\_

**Description of service delivery method:** (fiber, DSL, T1 / Copper, DS3, etc.) \_\_\_\_\_

**General Description of Customers:** (government, education, health, base businesses) \_\_\_\_\_

**List Interconnected Providers:** \_\_\_\_\_

**Radius of Services:** \_\_\_\_ miles from downtown Douglas Az., **List Connected Communities:** \_\_\_\_\_

**Location of Point Of Presence(s) (CO, POP, COLO, ETC):** \_\_\_\_\_

**Path of Inter Office Fiber (place on the Map color coded)**

**Description of Current Equipment Both Intra-building and Field** (switches, DSLAM, amplification, repeaters, servers) : \_\_\_\_\_

**Describe Current Broadband Configuration**

**Age of Equipment:** \_\_\_\_\_ years        **Equipment under Maintenance:** Yes or NO circle

**Terms of Contract and Contract Period:** \_\_\_\_\_



V. A survey to gather data to be utilized in generating a report on current adoption of broadband services to constitute desired levels of broadband capacity and services.

**Deliverable:** A survey was produced and distributed via email to the user groups within the four regions. The survey can be seen in Appendix G. Whereas the actual order of preferences for the Douglas project are focused on Economic Development, Education and Public Safety. This summation does not differ significantly from the responses for the survey.

Cochise County broadband application rankings (highest to lowest priority):

1. Economic Development
2. Telemedicine
3. Public Safety
4. Education

Overall ranking of the four counties:

1. Economic Development
2. Telemedicine
3. Public Safety
4. Education

## **2. Grant Opportunity Identification**

1. Research, identify and qualify feasible grant opportunities for funding or partial funding of middle mile conduit build outs utilizing SB1402 or other digital capacity (broadband) improvement projects...

**Deliverable:** Although there has been no middle mile conduit build out for the Douglas project, because there is not a middle mile problem in the area, instead there is a last mile distribution problem. This includes Public Safety, where the prison has fiber inside, but relies on a copper T1 line coming from the outside. There is, however, a ConnectAmerica Fund II for broadband in rural Arizona. Both Cochise and Santa Cruz counties have been identified. Additional grant programs can be seen in Appendix H.

“There have been two rounds of Phase I support. In the first round of Phase I (conducted in 2012), two carriers (Frontier and CenturyLink) stated that they planned to deploy in Arizona. CenturyLink accepted \$509,175, while Frontier accepted \$254,200. The Commission has not put out county-level data for the first round of Phase I, but state-level data is available at <http://www.fcc.gov/maps/connect-america-fund-caf-phase-i>. For the second round of Phase I (conducted in 2013), **CenturyLink accepted \$4,624,275 to deploy to eight counties (Cochise, Coconino, Gila, Maricopa, Pinal, Santa Cruz, Yavapai, and Yuma)**, while Frontier accepted \$7,012,725 to deploy to three counties (Apache, Mohave, and Navajo). A map of planned second round deployments is available at <http://www.fcc.gov/maps/connect-america-fund-phase-i-round-two>. A note of caution - these are just planned deployments, and carriers are permitted to alter their deployment plans upon providing proper notice. Thus, a given county may end up receiving more or fewer locations than shown in initial deployment plans.”

Representative Number : TSR54

### **3. Broadband Committees**

1. Continue expansion of the Cochise Four County broadband committee.

**Deliverable:** The list of the Cochise Four County Broadband Committee members can be seen in Appendix I. The Douglas Project Broadband Members have formed an action team to construct demand aggregation and the committee consists of stakeholders and providers. This committee can be seen in Attachment J.

### **4. Broadband focused Webpage(s)**

1. Publication of pages is expected to occur at the inception of the approved activities. There will be periodic updates.

**Deliverables:** There have been periodic updates to the client's website. Cochise has directed the other three counties to also update their websites with the updated material provided. These updates can be seen in Appendix K.

## Appendix A

### ASET / NTIA QUARTERLY REPORT (Q4 2013)

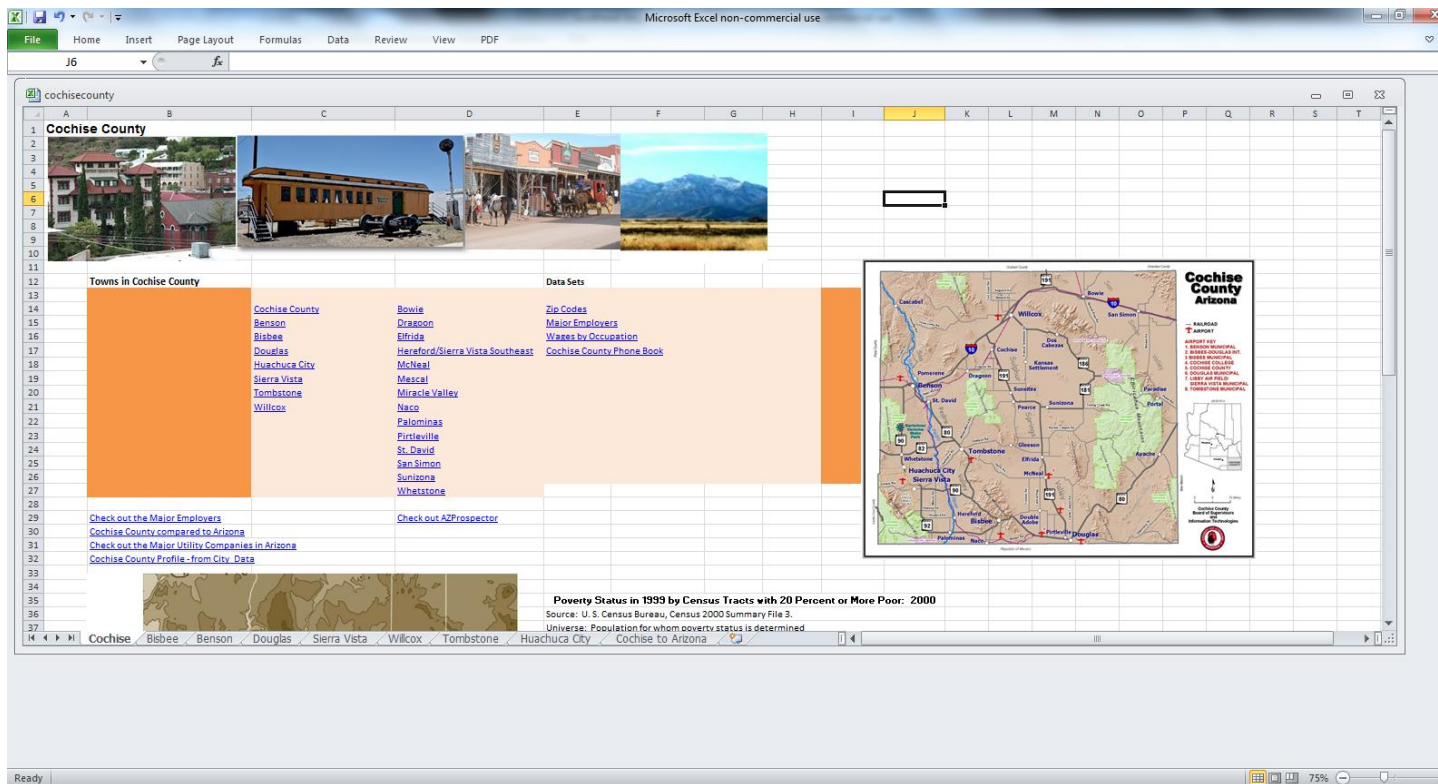
This report is intended to describe action against the tasks as described in the Broadband Community Planning Document: Exhibit 2 – Statement of Work (SOW) for the following three rural regions. The SOW includes four tasks. This report identifies activities for the period reported.

**South/Southeast Region including: Cochise, Graham, Greenlee and Santa Cruz Counties.** Whereas, Cochise County is the Administrator and Project Manager.

#### **Broadband Community Planning Activities (GOALS vs ACCOMPLISHMENTS:**

1. **Preparation of a Business Case Analysis** results:
  - a. Work with regions and projects begun.
  - b. Inventory assets (Community Data Sets) for four regions conducted and updated.
  - c. Systems Requirements document currently being prepared for Douglas, AZ project.
  - d. Demand aggregation of providers begins with list of regional providers obtained from the broadband map and then Tech/Assistance will follow up from Douglas defining General Requirements, and Community Planning and Technical Assistance providing System Requirement solutions.
2. **Grant Opportunities:** Working with USDA we have identified the following grants for first and second quarter of 2014:
  - a. Community Connect Grant
  - b. Distance Learning and Telemedicine Grant
  - c. Rural Utility Services (RUS)
  - d. Arizona Commerce Authority grants and funding for rural Arizona
  - e. Economic Development Authority (EDA, U.S. Dept. of Commerce)
3. **Broadband Committees: S./S.E. Region** formed a general Broadband Sub-Committee. Project Chair is the Chair of the Cochise Board of Supervisors. To better manage specific projects, Project Groups have been constructed. First kickoff meeting in NACO, AZ followed by Committee meeting in Douglas. Next meeting on February 2, 2014 at Cochise Campus-Douglas.
  - a. **Douglas, Arizona:** Review of Port-of-Entry, Cochise College and satellite campuses, Foreign Trade Zone (FTZ), Douglas Community and Economic Development.
  - b. **Committee:** Ann English (Chair of BofS Cochise County), Mayor of Douglas, City Manager, County Manager, Project/Grant Administrator, Assistant County Manager, Cochise College, Economic Developer, Community Planning and Technical Assistance.
4. **Broadband Focused Webpage(s):** Two updates provided to Cochise.
  - a. S./S.E. Broadband One Page-Phase II, see attachment 1.
  - b. Email to Cochise for new link: January 2014 – To: Lisa Marra  
Would you please have your NACOG webpage link to:  
[http://azbroadband.gov/Resources/Arizona\\_Rural\\_Initiatives.html](http://azbroadband.gov/Resources/Arizona_Rural_Initiatives.html).

## Appendix B Cochise Community Data Sets



The image above is a screen shot of the Community Data Set for Cochise County. The data includes:

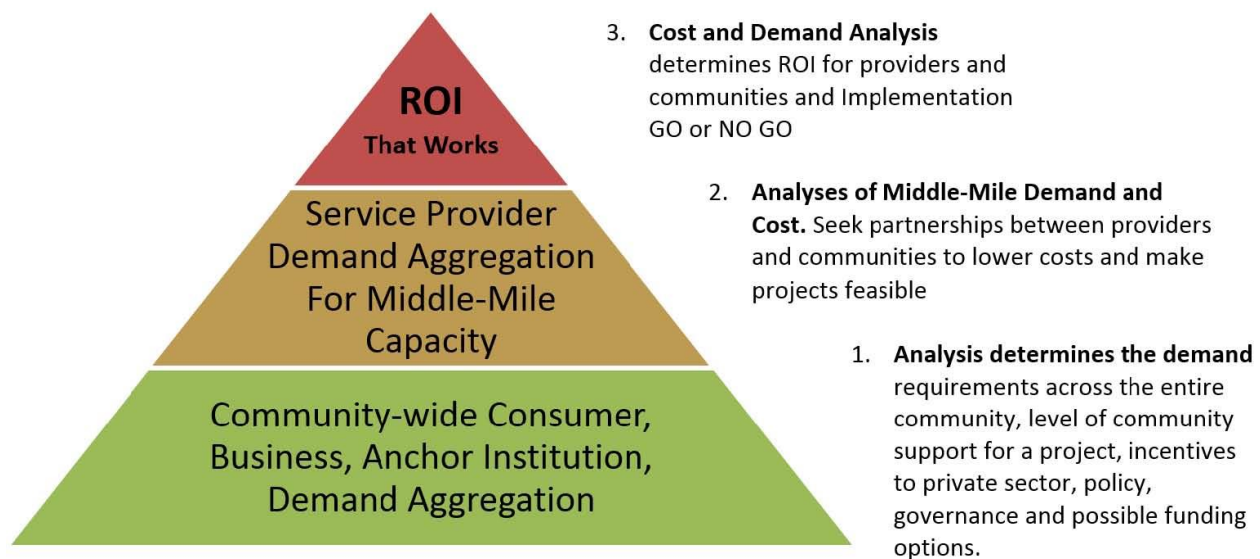
1. Hyperlinks to many of the cities/towns in Cochise County.
2. A map of Cochise County with locations of cities/towns.
3. A comparison of Cochise County to Arizona.
4. Major utility companies in servicing the County.
5. A tab for each City: Bisbee, Douglas, Sierra Vista, Wilcox, Tombstone, Hauchuca City.

## Appendix C – A list of Douglas’ Service Providers

Company Name	Company Website	Contact Name	Contact Telephone	Contact Email	
Airespring, Inc.	<a href="http://www.airespring.com">www.airespring.com</a>	Sales	818-786-8990	<a href="mailto:sales@airespring.com">sales@airespring.com</a>	
AT&T	<a href="http://www.att.com">www.att.com</a>	Gary Sima	602-670-9200	<a href="mailto:gary.sima@att.com">gary.sima@att.com</a>	
BeamSpeed	<a href="http://www.beamspeed.com">www.beamspeed.com</a>	Sales	928-343-0300	<a href="mailto:sales@beamspeed.com">sales@beamspeed.com</a>	
Bolt Internet	<a href="http://www.boltinternet.com">www.boltinternet.com</a>	Sales	928-717-2658	<a href="mailto:sales@boltinternet.com">sales@boltinternet.com</a>	
Bullseye Telecom, Inc.	<a href="http://www.bullseyetelecom.com">www.bullseyetelecom.com</a>	John Dwyer	877-438-2855	<a href="mailto:sales@bullseyetelecom.com">sales@bullseyetelecom.com</a>	
Cable One	<a href="http://www.cableone.net">www.cableone.net</a>	Aldo Casartelli	928-445-4511	<a href="mailto:aldo.casartelli@cableone.biz">aldo.casartelli@cableone.biz</a>	
CenturyLink	<a href="http://www.centurylink.com">www.centurylink.com</a>	David Dameron	520-861-0322	<a href="mailto:david.dameron@centurylink.com">david.dameron@centurylink.com</a>	
CIS Wireless Broadband	<a href="http://www.cis-broadband.com">www.cis-broadband.com</a>	Steve Clark	520-458-0293	<a href="mailto:stclark@clarkinfosys.com">stclark@clarkinfosys.com</a>	
CITYNET	<a href="http://www.citynet.net">www.citynet.net</a>	Sales	800-881-2638	<a href="mailto:info@citynet.net">info@citynet.net</a>	
CommSpeed	<a href="http://www.commspeed.net">www.commspeed.net</a>	Sales	928-233-1111	<a href="mailto:info@commspeed.net">info@commspeed.net</a>	
Cox Arizona Telecom, LLC	<a href="http://www.cox.com">www.cox.com</a>	David Daniels	866-701-8737	<a href="mailto:daviddaniels177@yahoo.com">daviddaniels177@yahoo.com</a>	
Floor 13 Access	<a href="http://www.floor13access.com">www.floor13access.com</a>	Marty Schwarzkopf	602-920-3291	<a href="mailto:marty@floor13access.com">marty@floor13access.com</a>	
Freeway Networks		Nick Wold	602-692-4182	<a href="mailto:bnwold@gmail.com">bnwold@gmail.com</a>	
Frontier Communications	<a href="http://www.frontier.com">www.frontier.com</a>	Mark Jeffries	928-537-6660	<a href="mailto:Mark.Jeffries@ftr.com">Mark.Jeffries@ftr.com</a>	
GovNet	<a href="http://www.govnet.net">www.govnet.net</a>	Pat Barringer	480-424-1410	<a href="mailto:pat.b@govnet.net">pat.b@govnet.net</a>	
Grand Avenue Broadband	<a href="http://www.grandavebb.com">www.grandavebb.com</a>	Sales	623-640-7883	<a href="mailto:grandavebb@grandavebb.com">grandavebb@grandavebb.com</a>	
Granite Telecommunications, LLC	<a href="http://www.granitenet.com">www.granitenet.com</a>	Sales	866-205-8928	<a href="mailto:custserv@granitenet.com">custserv@granitenet.com</a>	
Greenfield Communications	<a href="http://www.egreenfield.com">www.egreenfield.com</a>	Sales	888-230-0020	<a href="mailto:sales@egreenfield.com">sales@egreenfield.com</a>	
GSWTelecom	<a href="http://www.gswtelecom.com">www.gswtelecom.com</a>	Andy Wieser	520-488-6675	<a href="mailto:andy.wieser@gswtelecom.com">andy.wieser@gswtelecom.com</a>	
HP-AZ.net	<a href="http://www.HPAZ.net">www.HPAZ.net</a>	Curt Vincent	520-732-2208	<a href="mailto:sales@hpaz.net">sales@hpaz.net</a>	
InfoWest	<a href="http://www.infowest.com">www.infowest.com</a>	Sales	435-674-0165	<a href="mailto:info@infowest.com">info@infowest.com</a>	
Integra Telecom	<a href="http://www.integratelecom.com">www.integratelecom.com</a>	Chip Gorsuch	877-953-7747	<a href="mailto:chip.gorsuch@integratelecom.com">chip.gorsuch@integratelecom.com</a>	
Last Mile Research	<a href="http://www.lastmileresearch.com">www.lastmileresearch.com</a>	Sales	415-462-1775	<a href="mailto:sales@lastmileresearch.com">sales@lastmileresearch.com</a>	
Logicalis	<a href="http://www.us.logicalis.com">www.us.logicalis.com</a>	Brian Arland	602-369-7409	<a href="mailto:brianarland@us.logicalis.com">brianarland@us.logicalis.com</a>	
MegaPath	<a href="http://www.megapath.com">www.megapath.com</a>	Sales	480-467-3237	<a href="mailto:sales@megapath.com">sales@megapath.com</a>	
MTE Telecom	<a href="http://www.mtecom.net">www.mtecom.net</a>	Sales	800-462-4523	<a href="mailto:info@mtecom.net">info@mtecom.net</a>	
NI Solutions	<a href="http://www.nisolution.com">www.nisolution.com</a>	Irshad Ansari	317-616-3301	<a href="mailto:iansari@nisolution.com">iansari@nisolution.com</a>	
Red Rock Telecom		Jack Pleiter	480-745-7902	<a href="mailto:jack@redrocktelecom.com">jack@redrocktelecom.com</a>	
RuralNet Wireless	<a href="http://www.ruralnetwireless.com">www.ruralnetwireless.com</a>	Bob Enyeart	866-446-5882	<a href="mailto:mail4liberty@yahoo.com">mail4liberty@yahoo.com</a>	
Schurz Communications, Inc.	<a href="http://www.schurz.com">www.schurz.com</a>	Sales	574-247-7237	<a href="mailto:info@schurz.com">info@schurz.com</a>	
Simply Bits	<a href="http://www.simplybits.com">www.simplybits.com</a>	Sales	520-545-0400	<a href="mailto:sales@simplybits.com">sales@simplybits.com</a>	
Simply The BeSST, LLC		Travis Foster	602-295-7305	<a href="mailto:travis@stbaz.com">travis@stbaz.com</a>	
Sprocket Communications	<a href="http://www.getsprocket.net">www.getsprocket.net</a>	Sales	520-740-9700	<a href="mailto:info@getsprocket.net">info@getsprocket.net</a>	
SRP Telecom	<a href="http://www.srpnet.com">www.srpnet.com</a>	Jeff Taylor	602-236-8777	<a href="mailto:wireline@srpnet.com">wireline@srpnet.com</a>	
Suddenlink	<a href="http://www.suddenlink.com">www.suddenlink.com</a>	Glen Clark	928-774-5336	<a href="mailto:glen.clark@suddenlink.com">glen.clark@suddenlink.com</a>	
Swift Wireless Internet	<a href="http://www.swiftwireless.net">www.swiftwireless.net</a>	Sales	928-634-7828	<a href="mailto:sales@swiftwireless.com">sales@swiftwireless.com</a>	
Table Top Telephone Company	<a href="http://www.tabletoptelephone.com">www.tabletoptelephone.com</a>	Sales	520-387-5600	<a href="mailto:genofc@tabletoptelephone.com">genofc@tabletoptelephone.com</a>	
TDS Telecom	<a href="http://www.tdstelecom.com">www.tdstelecom.com</a>	Sales	866-448-0071	<a href="mailto:bizcenter@tdstelecom.com">bizcenter@tdstelecom.com</a>	
Transcend Broadband	<a href="http://www.transcendbroadband.net">www.transcendbroadband.net</a>	Sales	520-413-4861	<a href="mailto:info@transcendbroadband.com">info@transcendbroadband.com</a>	
Transworld Network	<a href="http://www.twncorp.com">www.twncorp.com</a>	Sales	800-253-0665	<a href="mailto:customersvc@twncorp.com">customersvc@twncorp.com</a>	
tw telecom	<a href="http://www.twtelecom.com">www.twtelecom.com</a>	Brenda Beall	602-574-2937	<a href="mailto:brenoffire@gmail.com">brenoffire@gmail.com</a>	
UNSi.net	<a href="http://www.unsi.net">www.unsi.net</a>	Sales	855-888-8674	<a href="mailto:info@unsi.net">info@unsi.net</a>	
USA Digital Communications	<a href="http://www.usad.com">www.usad.com</a>	Sales	888-872-3787	<a href="mailto:info@usad.com">info@usad.com</a>	
Valley Telecom	<a href="http://www.vtc.net">www.vtc.net</a>	Mike Fortenberry	800-421-5711	<a href="mailto:mike.fortenberry@vtc.net">mike.fortenberry@vtc.net</a>	
Venicom	<a href="http://www.venicom.com">www.venicom.com</a>	Ed Parker	602-370-4225	<a href="mailto:ed.parker@venicom.com">ed.parker@venicom.com</a>	
Webhiway Communications	<a href="http://www.webhiway.com">www.webhiway.com</a>	John	520-612-6125	<a href="mailto:john@webhiway.com">john@webhiway.com</a>	
Windstream	<a href="http://www.windstreambusiness.com">www.windstreambusiness.com</a>	Steve Godsey	602-429-3442	<a href="mailto:Steven.Godsey@windstream.com">Steven.Godsey@windstream.com</a>	
WydeBeam	<a href="http://www.wydebeam.com">www.wydebeam.com</a>	Sales	480-964-4749	<a href="mailto:sales@wydebeam.com">sales@wydebeam.com</a>	
XO Communications Services, Inc.	<a href="http://www.xo.com">www.xo.com</a>	Sales	800-815-6223	web fill-in form	
Zayo Enterprise Networks	<a href="http://www.zayo.com">www.zayo.com</a>	Sales	866-364-6033	<a href="mailto:sales@zayo.com">sales@zayo.com</a>	
Zona Communications	<a href="http://www.zonacommunications.com">www.zonacommunications.com</a>	Sales	623-455-4555	<a href="mailto:customerservice@teamzona.com">customerservice@teamzona.com</a>	

## Douglas, Arizona Broadband Project

### Systems Requirements Specifications



This diagram is presented in the Broadband Business Case Analysis. Although Middle Mile does represent an operational weak-point, the Douglas project is more focused on a Last Mile and Distribution problem to meet consumer demand. To better understand the demands of the consumer, it is essential that the consumer define their system's requirements. In an effort to help with this activity, we are requesting the following information be completed to the best of ability and sent to:

Lisa Marra, [LMarra@cochise.az.gov](mailto:LMarra@cochise.az.gov) and copy Bill Bolin: [billbolin@hotmail.com](mailto:billbolin@hotmail.com)

**Purpose:** Better serve rural Arizona (Douglas, AZ) with broadband capabilities and capacities to support: 1) Economic Development (Jobs), 2) Education, 3) Telemedicine and 4) Public Safety.

**Scope of Work:** To work with stakeholders and complete a picture of their business demands for broadband infrastructure that can be effectively communicated to service providers, whereas the service providers will produce cost effective alternatives to meet the stakeholder's demands.

Appendix D – Systems Requirements continued...

**SYSTEM REQUIREMENTS SUMMARY:**

**Name of Business:** \_\_\_\_\_

**Location (address):** \_\_\_\_\_

**Type of Business:** \_\_\_\_\_  
(Education, Medical, Government, Business, Public Safety)

**Major Application(s):** \_\_\_\_\_  
(taxes, accounting, enrollment, admission/transfer/discharge, production, sales, marketing, etc.)

**Describe Volume and Frequency:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Number of Users:** \_\_\_\_\_ **Peak Time of Day/Night:** \_\_\_\_\_

**Number of PCs in facility(s):** \_\_\_\_\_

**Description of Current Equipment** (switches, servers, host computer(s): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Describe Current Broadband Configuration** (fiber, DSL, T1 / Copper, DS3, etc.)

**Age of Equipment:** \_\_\_\_\_ years **Equipment under Maintenance:** Yes or NO circle

**Terms of Contract and Contract Period:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Describe YOUR Major Goal:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

In terms of bandwidth if known, what synchronous throughput capacity and/or speed ( Mbps )...not how it is delivered ( fiber vs copper vs wireless, Etc )

**MUST Have** \_\_\_\_\_ **LIKE to Have** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Please indicate your Name and contact information:**

**NAME:** \_\_\_\_\_ **email:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

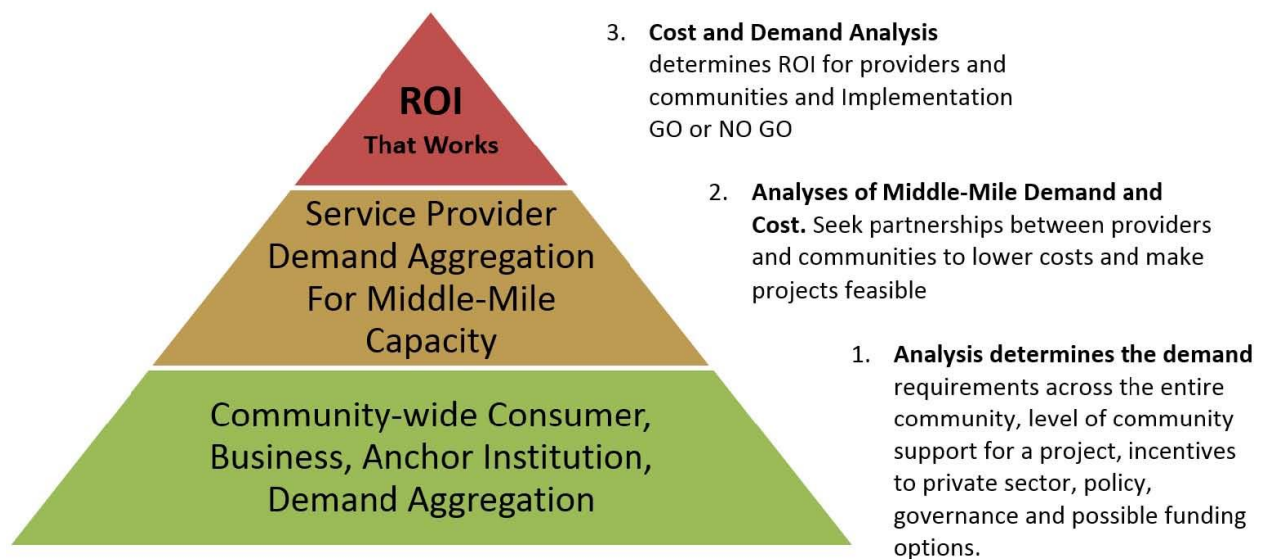
## Appendix E – Summary of the Systems Requirements

dougssystemsummary													
A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Cochise County - Rural Broadband Program				REGION: Douglas, Arizona		12-Mar-14			douglssystemsummary.xls	2/27/2014		
2	User's System Requirements Summary												
3	Business	Type of Business	Major Application	Number of Users	Peak Time of Use	Number of PCs	Current Equipment	Current BB Config	Age of Equipment	Equipment Maintenance	Goal	Speeds	Contact
4												Must Have	like to
5	Cochise County	Government	County Gov & Public Safety	900	7:30am-5pm	800	ChenServer, video conf., VPN	DS3	?	Yes	Provide sufficient bandwidth for County needs. At least 100Mbps & scale as needed	100Mbps	200Mbps Tysen/Block
6													
7													
8													
9	AZ Dept of Corrections	State Government	Adult Prison	2,400 inmates 24x7			350 HP and Cisco Switches	T1	10 years	NO	Ideal Internet connectivity	Open best available	
10				600 staff									
11				500 users									
12													
13	Douglas ISD #27	Education K-12	Learning Instructional	4,200 all day		2,500 2-DS3 routers in bundle	2,500 computers	40 servers	3 years	Yes		100Mbps	200Mbps
14						Internet router determines circuit	100 switches						
15													
16													
17	Dryden Douglas	Government	Gov acqg, laws, document management	250 7am-5pm		200 Cisco network, Cisco UCS 5108 - server, VDI's and computers	Other DS3, T1	DS3 T1 or fiber	?	Yes	Deliver enough bandwidth for Dryden Douglas to conduct services and applications	100Mbps	200Mbps Joel Camacho
18													
19													
20													
21	Cochise Comm College	Education	Dist Learn, student services	1,000 7am-5pm		700 Switches, servers, routers, wireless	Other DS3, T1, Thoppey, DS3	3-5 years	Yes	Improve bandwidth to meet goals of Cochise College current and future	100Mbps	1GB	
22			labs, classes, HR, OIT req			printers, desktops, tablets, mobile laptops							
23													
24													
25	Providers attending 3/12/2014 Douglas, AZ Broadband Meeting												
26	Valley Telecom	Comcast, Pro-Repes											
27	CenturyLink	David Dawson											
28	GOVNET	Karen McCoy											
29	HPAZNET	Jeff Tyler											
30	GSW Telecom	Andy Weber											
31													
32													
33													
34													
35													



## Douglas, Arizona Broadband Project

### PROVIDER'S Systems Requirements Specifications



This diagram is presented in the Broadband Business Case Analysis. Although Middle Mile does represent an operational weak-point, the Douglas project is more focused on a Last Mile and Distribution problem to meet consumer demand. To better serve the demands of the consumer, it is essential that Carriers define their network reach. In an effort to help with this activity, we are requesting the following information be completed to the best of ability and sent to:

Lisa Marra, [LMarra@cochise.az.gov](mailto:LMarra@cochise.az.gov), copy Jim Simms [jim.simms@centurylink.net](mailto:jim.simms@centurylink.net) and Bill Bolin: [billbolin@hotmail.com](mailto:billbolin@hotmail.com)

**Purpose:** Better serve rural Arizona (Douglas, AZ) with broadband capabilities and capacities to support: 1) Economic Development (Jobs), 2) Education, 3) Telemedicine and 4) Public Safety.

**Scope of Work:** To work with stakeholders and complete a picture of their business demands for broadband infrastructure that can be effectively communicated to service providers, whereas the service providers will produce cost effective alternatives to meet the stakeholder's demands.

**NETWORK / FACILITY SUMMARY:**

**Name of Business:** \_\_\_\_\_

**Location (address):** \_\_\_\_\_

**Business (Public or Private) (circle one)**    **Public**        **Private**  
**International,        National,        Regional,        Local (circle best description)**

**Arizona Corporation Commission or FCC registration type:** (CLEC, ILEC, common carrier, unregistered, etc.) \_\_\_\_\_

**Local Contact Person (name, title email, phone):** \_\_\_\_\_

\_\_\_\_\_

**Description of service delivery method:** (fiber, DSL, T1 / Copper, DS3, etc.) \_\_\_\_\_

\_\_\_\_\_

**General Description of Customers:** (government, education, health, base businesses) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**List Interconnected Providers:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Radius of Services:** \_\_\_\_\_ miles from downtown Douglas Az., **List Connected Communities:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Location of Point Of Presence(s) (CO, POP, COLO, ETC):** \_\_\_\_\_

\_\_\_\_\_

**Path of Inter Office Fiber (place on the Map colorcoded)**

**Description of Current Equipment Both Intra-building and Field (switches, DSLAM, amplification, repeaters, servers) :** \_\_\_\_\_

\_\_\_\_\_

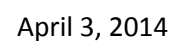
**Describe Current Broadband Configuration**

**Age of Equipment:** \_\_\_\_\_ years        **Equipment under Maintenance:** Yes or NO circle

**Terms of Contract and Contract Period:** \_\_\_\_\_

\_\_\_\_\_

Systems Requirement: Draw on this map or produce your own map. Please show where services are provided both originated and terminated. Using different colors highlight End-user available network, planned, funded and any construction underway. Be creative however, the end product must clearly state what network is currently available, planned and funded for customer service delivery.



## ATTACHMENT G: Survey Ranking of Applications Example

Date: Wed, 5 Jun 2013 15:15:42 -0700

From: [jucas@graham.az.gov](mailto:jucas@graham.az.gov)

To: [billbolin@hotmail.com](mailto:billbolin@hotmail.com)

Subject: Re: Broadband Applications Ranking Order

1, 3, 2, 4

John C Lucas

(928) 965-6041 cell

(928) 428-3905 desk

Sent from my iPhone

On Jun 5, 2013, at 3:10 PM, "Bill Bolin <[billbolin@hotmail.com](mailto:billbolin@hotmail.com)>" <[billbolin@hotmail.com](mailto:billbolin@hotmail.com)> wrote:  
First, allow me to thank each of you for your contribution to Arizona's rural broadband project, officially known as the **Arizona Digital Program (DAP)**.

One of the key items we would like to have from you is a ranking of the applications as you see in order of importance.

The applications are **1) Economic Development (JOBS), 2) Education, 3) Telemedicine and 4) Public Safety**.

All you have to do is send me a return email, with your ranking. Just put it in order of the application number, i.e., 1, 3, 4, 2. Then I will summarize and return the results to you.

### **A little Definition and how broadband plays a major role:**

1) **Economic Development (JOBS)** - refers to business retention and expansion. Of course there will be resident retention if the jobs are available. Business Attraction is an element, but retention is the key. Broadband is required for Supply-Chain, business-to-business and enhanced skill sets.

2) **Education** - employers are looking for additional skill sets to meet their demands and the high schools, community colleges and tech-schools must have broadband capacity for webinars, video downloads and better internet access to meet these demands.

3) Since the passage of SB 1353, there will be more emphasis on **telemedicine** between the physician and patient for rural regions and communities. Greater broadband capacity is required to transfer these larger medical files from the attending physician, patient, clinic and referring physician. Without the broadband capacity to transfer large files, there will be the need for the patient to physically visit the doctor and in rural locations this can present many problems.

4) **Public Safety** - the S. and S.E. Arizona regions are particularly susceptible to P.S. communications and the goal is to have seamless communications among all of the P.S. entities. Broadband can serve as the backbone to FirstNet and provide additional redundancy.

### **SEND YOUR RANKING TO ME.**

Thank you for your cooperation and I look forward to meeting you soon,

Bill

Appendix H:

**DAP Broadband Grants & Resources**

Under the auspices of the Southeast Arizona Broadband Steering Committee, an extensive **DAP Broadband Grants & Resources Guide** has been developed for **Digital Arizona Program (DAP - <http://azbroadband.gov/>)**. Please reference the separate standalone document who's Table of Contents follows:

**DAP Broadband Grants & Resources Guide**

**Table of Contents**

**Preface**

**Broadband Grants Seekers Introduction**

**State of Arizona Grant Opportunities**

**Arizona Strategic Enterprise Technology Office (ASET)**

**Arizona Governor's Office**

**Arizona Department of Education**

**Arizona State Library, Archives and Public Records**

**Arizona Department of Homeland Security**

**Arizona Department of Commerce (ACA)**

**Science Foundation of Arizona (SFAz)**

**Arizona Corporation Commission (ACC)**

**Arizona Telemedicine Program (ATP)**

**Arizona Grantmakers Forum (AGF)**

**Federal Government Grant Opportunities**

**General Federal Grant Sources**

**U.S. Dept. of Agriculture (USDA) Rural Utility Services (RUS)**

**Federal Communications Commission (FCC)**

**U.S. Dept. of Commerce (DOC) National Telecommunications  
& Information Administration (NTIA)**

**U.S. Dept. of Commerce (DOC) Bureau of Economic Analysis**

**Education & Libraries Specific**

**Telehealth Specific**

**Public Safety Specific**

**Small Business Innovation Research (SBIR)**

**Small Business Technology Transfer (STTR)**

**Small Business Administration (SBA) Programs**

**Other Grant Opportunities**

**Foundations and Trusts - Arizona Specific**

**Foundations and Trusts - National**

**Company and Community Investment**

**DAP Broadband Grants & Resources Guide**  
**Table of Contents (Continued)**  
**Broadband Resources**  
**Federal Resources**  
**State Digital Capacity Plans and Resources**  
**Arizona State Resources**  
**National Nonprofit Organizations**  
**National Trade Associations**  
**Arizona Nonprofit Organizations and Trade Associations**  
**National eLearning and Technology in Education Resources**  
**Arizona eLearning and Technology in Education Resources**  
**National Telehealth Resources**  
**Arizona Telehealth Resources**  
**National eGovernment Resources**  
**Arizona eGovernment Resources**  
**National Discovery, Innovation and Research Resources**  
**Arizona Discovery, Innovation and Research Resources**  
**National Smart Energy and Environmental Resources**  
**Arizona Smart Energy and Environmental Resources**  
**National Public Safety Communications Resources**  
**Arizona Public Safety Communications Resources**  
**National Native American Resources**  
**Arizona Native American Resources**  
**Arizona Statistical Resources**  
**Community Toolkits, Economic and Financial Modeling**

## Appendix I – Cochise Broadband Committee Members

<b><u>COMMITTEE MEMBERS</u></b>						
Genz, Mark	Commander	Cochise County	Cochise	Sheriff's Office	520-432-9506	mgenz@cochise.az.gov
Motter, Gussie	Econ. Develp. Mgr	Cochise County	Cochise	Board Office	520-432-9215	kmotter@cochise.az.gov
Sturm, Norm	Emergency Services Coord	Cochise County	Cochise	Board Office	520-432-9220	nsturm@cochise.az.gov
Adamson, Brian	Network Engineer	Cochise County	Cochise	IT Dept	520-432-8306	badamson@cochise.az.gov
Lucas, John	IT Director/CIO	Graham County	Graham	IT Dept	928-965-6041	JLucas@graham.az.gov
Howell, Scott	Sergeant	Graham County	Graham	Sheriff's Office	928-792-5404	showell@graham.az.gov
Berube, Charles	IT/IS Director	Greenlee County	Greenlee	IT Dept	928-651-3957	berube@co.greenlee.az.us
Sexton, Pat	Undersheriff	Greenlee County	Greenlee	Sheriff's Office	928-965-9290	psexton@co.greenlee.az.us
Mavis, Raul	IT Director	Santa Cruz County	Santa Cruz	IT Dept	520-375-7785	rmavis@co.santa-cruz.az.us
Castillo, Gerardo	Lieutenant	Santa Cruz County	Santa Cruz	Sheriff's Office	520-761-7869	gcastillo@co.santa-cruz.az.us
Chmura, David	Chief Information Officer	Copper Queen Hospital	All	IT Dept	520-432-5383	dchmura@cqch.org
Cartagena, Carlos	VP for IT	Cochise College	All	IT Dept	520-515-5485	cartagec@Cochise.edu
<b><u>COUNTY ADMINISTRATION</u></b>						
Ortega, Mike	County Manager	Cochise County	Cochise	Administration	520-432-9200	mortega@cochise.az.gov
Vlahovich, Jim	Deputy County Mgr	Cochise County	Cochise	Administration	520-432-9200	jvlahovich@cochise.az.gov
Cooper, Terry	County Manager	Graham County	Graham	Administration	928-428-3250	tcooper@graham.az.gov
Gale, Kay	County Manager	Greenlee County	Greenlee	Administration	928-865-2310	kgale@co.greenlee.az.us
Rivera, Carlos	County Manager	Santa Cruz County	Santa Cruz	Administration	520 375-7812	crivera@co.santa-cruz.az.us



**DOUGLAS BROADBAND COMMITTEE and PROVIDER MEETING**Cochise College - Douglas Campus - Student Union  
March 12, 2014

NAME / Initial	ORGANIZATION	EMAIL	PHONE
Abingo, Greg	Arizona State Prison Complex		520-364-7521 x 34202
Barringer, Pat	Governel		
Berry, Trudy	Cochise County School Superintendent	tberry@cochise.az.gov	520-432-8950
Bolin, Bill	Systems Technology Staffing, LLC	billBolin@hotmail.com	
Camacho, Joel	City of Douglas	joel.camacho@douglasaz.gov	520-417-7706
Cartagena, Carlos	Cochise College	cartagenc@cochise.edu	520-515-5485
Dameron, David	Century Link	david.dameron@centurylink.com	520-861-0322
DeLaTorre, Carlos	City of Douglas	carlos.delatorre@douglasaz.gov	520-417-7302
English, Ann	Cochise County - Chairman of the Board	Aenglish@cochise.az.gov	520-432-8200
Favela, George	Century Link	george.favela@centurylink.com	520-838-3033
Fortenberry, Mike	Valley Telecom		
Henderson, Howard	Douglas IDA and KDAP Radio	kdapfm@yahoo.com	520-364-3484
Huerfana, Karla	Arizona State Prison Complex	khuerfana@azcorrections.gov	520-266-4971
Lucas, John	Graham County	jlucas@graham.az.gov	
Marra, Lisa	Cochise County	Lmarra@cochise.az.gov	520-432-9742
McCoy, Karen	Governel	karen.m@governel.net	480-424-1411
Meits, Steve	Valley Telecom	Steve.Meits@vt.net	520-384-2231



DOUGLAS BROADBAND COMMITTEE and PROVIDER MEETING				
Cochise College - Douglas Campus - Student Union				
March 12, 2014				
NAME / Initial	ORGANIZATION	EMAIL	PHONE	
Mock, Tyson	Cochise County	Tmock@cochise.az.gov	520-432-8303	
Morrison, Terry	Telecommunications Management, Inc	tmorrison@telman.net	480-837-6100	
Ortega, Danny Jr.	City of Douglas - Mayor	danny.ortega@douglasaz.gov		
Ortega, Michael	Cochise County	Mortega@cochise.az.gov	520-432-9205	
Pino-Reyes, Corina	Valley Telecom	corina.reyes@vyc.net	520-508-1400	
Ramirez, Luis	Ramirez Advisors	luis@ramirezadvisors.com		
Simms, Jim	One Random Act, LLC	jim.simms@centurylink.net		
Smith, Les	GSW Telecom	les.smith@gswtelecom.com		
Sturm, Norm	Cochise County	Nsturm@cochise.az.gov	520-432-9220	
Tyler, Ben	HPAZ	ben@hpaz.net	520-732-2208	
Tyler, Jeff	HPAZ	jeff@hpaz.net		
Urquijo, Ana	City of Douglas	ana.urquijo@douglasaz.gov	520-417-7326	
Wanovich, Jim	Cochise County	jwanovich@cochise.az.gov	520-432-9206	
Weiser, Andy	GSW Telecom	andy.weiser@gswtelecom.com	520-488-0675	

## Cochise - Four Counties (COCHISE - FOUR COUNTIES)

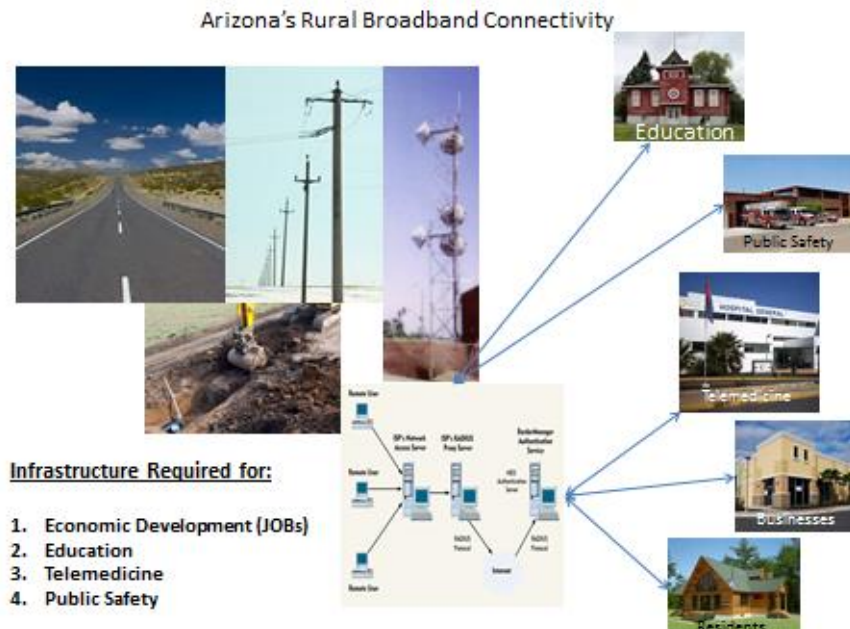
### Broadband Community Planning November 2013 – April 2014

COCHISE - FOUR COUNTIES was asked to provide four regions where broadband projects and activities will generate and/or compliment:

1. **Region 1 – Cochise** County = Douglas, AZ
2. **Region 2 – Graham** County = Safford/Solomon
3. **Region 3 - Santa Cruz** County = Nogales/Rio Rico
4. **Region 4 - Greenlee** County = Clifton / Morenci

Although Planning and Technical Assistance are critical elements to the broadband project, there is now the beginning of concentration on programs that can provide the essential infrastructure to begin actual construction of planned projects. There is a three point program approach:

1. **Community Planning** – an inventory of current assets
2. **Technical Assistance** – evaluation of needed requirements by the region and proposed system solutions to meet the demands/requirements.
3. **Future Infrastructure** – requirements to implement the solution(s).



This picture shows road construction with trenching for conduit/fiber, with connectivity to existing poles and microwave to provide broadband coverage for schools, businesses, public safety, medical and residents. All users are tied into a network to provide the best affordable coverage for the region / community.

## Cochise - Four Counties (COCHISE - FOUR COUNTIES)

### Broadband Community Planning November 2013 – April 2014

#### Web Update January – March 2014

COCHISE - FOUR COUNTIES was asked to provide four regions where broadband projects and activities will generate and/or compliment:

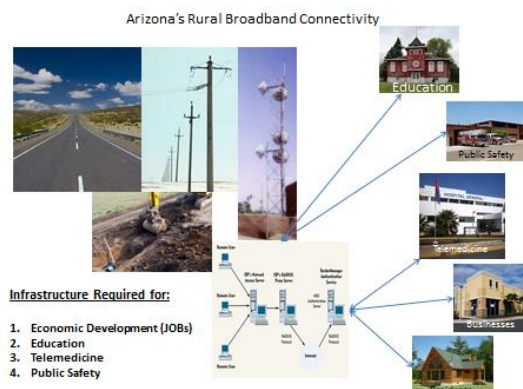
1. **Region 1 – Cochise** County = Douglas, AZ
2. **Region 2 – Graham** County = Safford/Solomon
3. **Region 3 - Santa Cruz** County = Nogales/Rio Rico
4. **Region 4 - Greenlee** County = Clifton / Morenci

Although Planning and Technical Assistance are critical elements to the broadband project, there is now the beginning of concentration on programs that can provide the essential infrastructure to begin actual construction of planned projects. There is a three point program approach:

1. **Douglas, Arizona** is the immediate Project. There have been meetings to identify the current assets, formulate Stakeholders' System Requirements and meetings with Broadband Service Providers to determine their services, capacities and alternative solutions (GAP Analysis) to meet the Stakeholder's System Requirements.

2. **Future Infrastructure –** Service Providers provide alternatives. Stakeholders determine best solution for implementation. Making rural broadband sustainable for business and resident retention, new business attraction, better education, tele-health and public safety.

#### What does it Really look like?



Trenching



Feeder Cables: Substation to Switch Cabinets, distribute to transformers Broadband Providers' Conduit

These pictures show road construction with trenching for power, conduit/fiber, with connectivity to existing poles and microwave to provide broadband coverage for schools, businesses, public safety, medical and residents' usage. All users are tied into a network to provide the best affordable coverage for the region / community.

## Appendix L: A look at additional projects for Cochise County

### A Southeast Arizona Regional Broadband Project Profile:

#### Cochise County:



#### Cochise Strategic Plan identified:

#### BROADBAND APPLICATIONS

- **Public Safety and Justice** — promote safe communities, strengthen legal services, and ensure access to justice

.....FirstNet ?

- **Environment and Land Use** — preserve and enhance the rural nature of Cochise County by encouraging open space and wise use of water and other natural resources to sustain and enhance the local economy

.....Economic Development

- **Infrastructure Management** — prudently manage our investment in civil and capital infrastructure

.....Transportation

- **Health and Wellbeing** — promote public health, safety, and preparedness in all county communities

.....Telemedicine

#### 1. Work on the Sector Partnerships:

- a. Utilities Certificate
- b. Mining – education, match skill-sets to industry demands
- c. Medical – enhance telemedicine projects
- d. Southern AZ Logistics Education Organization (SALEO)
- e. Border Security

**STS is currently engaged with Rio Tinto, the world's second largest mining company. One of their objectives is to look at Bisbee, AZ and an element of mining is broadband (internet).**

## Appendix L: A look at additional projects for Graham County

### **A Southeast Arizona Regional Broadband Project Profile: Graham County:**



#### **Recommendations:**

1. Out of the four counties, Graham has the most government jobs. How can systems and broadband capabilities provide better service to residents and businesses?
2. Work on the 2013 Sector Partnerships:
  - a. Utilities Certificate
  - b. Mining – education, match skill-sets to industry demands
  - c. Medical – enhance telemedicine projects
  - d. Southern AZ Logistics Education Organization (SALEO)
  - e. Border Security
3. Develop a Strategic Plan – include Broadband
  - a. Growth of cities and regions depends largely on access to technology, especially broadband infrastructure

**STS is currently engaged with Rio Tinto, the world's second largest mining company. One of their objectives is to look at Graham County and an element of mining is broadband (internet).**



Appendix L: A look at additional projects for Greenlee County

### **A Southeast Arizona Regional Broadband Project Profile:**

#### **Greenlee County:**



Currently there is a Greenlee County Courts IT Strategic Plan.

#### **Recommendations:**

2. Continue - GRAHAM AND GREENLEE REGIONAL PARTNERSHIP COUNCIL
3. Diversify – ore prices and demand are variables. What can you do when the mines downsize employees?
4. Work on the Sector Partnerships:
  - a. Utilities Certificate
  - b. Mining – education, match skill-sets to industry demands
  - c. Medical – enhance telemedicine projects
  - d. Southern AZ Logistics Education Organization (SALEO)
  - e. Border Security
5. Develop a Strategic Plan – include Broadband
  - a. Growth of cities and regions depends largely on access to technology, especially broadband infrastructure

**STS is currently engaged with Rio Tinto, the world's second largest mining company. One of their objectives is to look at FMI mine in Clifton/Morenci, AZ and an element of mining is broadband (internet).**

## Appendix L: A look at projects for Santa Cruz County

### A Southeast Arizona Regional Broadband Project Profile:

#### Santa Cruz County:



#### Recommendations:

1. Develop a Santa Cruz County Strategic Plan – include Broadband
  - a. Growth of cities and regions depends largely on access to technology, especially broadband infrastructure
2. Focus on business and resident retention
3. Work on the Sector Partnerships:
  - a. Utilities Certificate
  - b. Mining – education, match skill-sets to industry demands
  - c. Medical – enhance telemedicine projects
  - d. Southern AZ Logistics Education Organization (SALEO)
  - e. Border Security
4. Mariposa Port of Entry – includes international trade, border security, and Jobs

## Appendix M: SEAGO's Broadband Endorsement

The following is an extract from the South Eastern Arizona Government Organization (SEAGO), representing the Broadband Applications for Business and Government Technology from 2011 – 2013. This is a 5 year program.

### **SEAGO REGION PROJECT LIST**

#### **Project Category FY Cost Source**

Establish Regional CEDS Infrastructure, Build Econ Dev Capacity in the Region Capacity Building FY12-13 \$ 150,000 EDA

Research expansion of Import-Export trade, identify business clusters Sector Cluster research FY11-12 \$ 75,000 EDA

Expansion of Naco, Az border crossing Infrastructure Dev FY11-12 \$ 1,300,000 EDA, SBA, USDA

Water Storage Capacity Water Reuse System (Town of Tombstone) Infrastructure Dev FY12-13 \$ 1,500,000 EDA, USDA, EPA

Regional Landfill Design (SEAGO Solid Waste District) Infrastructure Dev FY13-14 \$ 6,520,000 EDA, USDA, EPA

**Broadband Applications for Businesses and Government Technology Dev**  
FY12-13 \$ 75,000 EDA, USDA